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a delay management mechanism for initializing said delays and subsequently changing said delays, said changing being contingent, for each said correlator, only on an output of said each correlator.

REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-23 are in this case. Claims 1, 4 and 5 have been rejected under § 102(a). Claims 2 and 3 have been objected to. Claims 6-23 have been allowed. Independent claim 1 has been amended.

The claims before the Examiner are directed toward a cellular telephony searcher and toward a method by which mobile stations of a cellular telephony network identify multipath channels to use to communicate with base stations. In particular, the searcher includes a plurality of correlators for correlating a received signal with a pseudonoise sequence, an input mechanism for inputting the pseudonoise sequence into the correlators with different delays, and a delay management mechanism for initializing and changing the delays. For each correlator, the change applied to that correlator's delay depends only on the output of that correlator.

§ 102(a) Rejections - Fenton et al. '064

The Examiner has rejected claims 1, 4 and 5 under § 102(a) as being anticipated by Fenton et al., U. S. Patent No. 5,809,064 (henceforth, "Fenton et al. '064"). The Examiner's rejection is respectfully traversed.

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Fenton et al. '064 teach a receiver for pseudorandom noise signals such as are transmitted by GPS satellites. Each channel **22** of the receiver uses PRN code generator **230** and two correlators **240** for acquiring and tracking the signal from a corresponding satellite. The delays, with which the pseudorandom code from PRN code generator **230** is supplied to correlators **240** by flip-flops **251**, are determined by P and L clock signals from P-comparator **226p** and L-comparator **226l** of synchronizer **220**. Correlators **240** are used in either “(early,late)” mode or in “(punctual,early-late)” mode, as determined by switch **256**. Acquisition is done in (early,late) mode. Tracking is done in (punctual,early-late) mode. In either mode,

...carrier and code drift is detected by determining the difference in the outputs of the correlators **240a** and **240b**. When a difference is detected, the synchronizer **220** is corrected by adjusting the internal values in its counters **222**, **224** or **226**... (column 10 lines 38-43; emphasis added))

For example, in (early,late) mode, the early/late power measurement

$$I_{Ek}^2 Q_{Ek}^2 - I_{Lk}^2 Q_{Lk}^2$$

(column 12 line 5) is used by processor **16** to adjust counters **222**, **224** and **226**. In (punctual,early-late) mode, the dot-product discriminator

$$I_{E-L,k} I_{Pk} - Q_{E-L,k} Q_{Pk}$$

(column 12 line 11) is used by processor **16** to adjust counters **222**, **224** and **226**. In either case, the delay, with which the pseudorandom code from PRN code generator **230** is supplied to either correlators **240**, depends on the outputs of both correlators **240**.

The present invention, as recited in claim 1, is similar to the receiver of Fenton et al. '064 inasmuch as the present invention includes a plurality of correlators, an input mechanism analogous to flip-flops **250** and **251** to input a pseudonoise sequence to the correlators with different respective delays, and a delay management

mechanism analogous to processor **16** and comparators **226p** and **226l** for initializing and changing the delays. The crucial difference between the present invention, as recited in claim 1, and the receiver of Fenton et al. '064 is that in the present invention, the change in the delay that is applied to the pseudonoise sequence for any specific correlator depends only on the output of that correlator, and is independent of the outputs of any of the other correlators. This is in contrast to the receiver of Fenton et al. '064, in which the change in the delay that is applied to the pseudonoise sequence for either correlator **240** depends on the outputs of both correlators **240**. Thus, the present invention, as recited in claim 1, is not anticipated by Fenton et al. '064.

Furthermore, the present invention, as recited in claim 1, is not obvious from Fenton et al. '064. There is neither a hint nor a suggestion in Fenton et al. '064 of any utility whatsoever to changing the delay, with which pseudonoise code is provided to one of a plurality of correlators, in accordance with only the output of that correlator, irrespective of the outputs of the other correlators.

While continuing to traverse the Examiner's rejections, Applicant, in order to expedite the prosecution, has chosen to amend independent claim 1 in order to clarify and emphasize the crucial distinctions between the device of the present invention and the device of the Fenton et al. '064 patent cited by the Examiner. Specifically, claim 1 has been amended to emphasize that the change applied to each correlator's delay, by the delay management mechanism, depends only on the output of that correlator ("said each correlator").

Support for this amendment is found in the specification, in Figure 2 and the accompanying text on page 14 line 9 through page 15 line 2. In particular, in block **42**, next location unit **28** decides whether to move a particular correlator **20** to the next

delay, based only on whether the absolute value of the output S_M of that correlator **20** exceeds the first dwell threshold, independent of the output of any other correlator **20**.

Amended independent claim 1 now features language which makes it absolutely clear that in the device of the present invention, the change applied to any particular correlator's delay, by the delay management mechanism, depends only on the output of that particular correlator, and not on the output of any other correlator. Applicant believes that the amendment of the claims completely overcomes the Examiner's rejections on § 102(b) grounds.

With independent claim 1 allowable in its present form, it follows that claims 4 and 5, that depend therefrom, also are allowable.

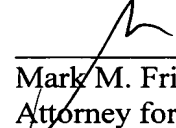
Objections

The Examiner has objected to claims 2 and 3 as being based on rejected base claims. The Examiner has noted that claims 2 and 3 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

In view of the discussion above in the context of the § 103(a) rejections, Applicant submits that the base claims from which claims 2 and 3 depend are allowable, making claims 2 and 3 allowable in their present form.

In view of the above remarks it is respectfully submitted that independent claims 1 and 6, and hence dependent claims 2-5 and 7-23 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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